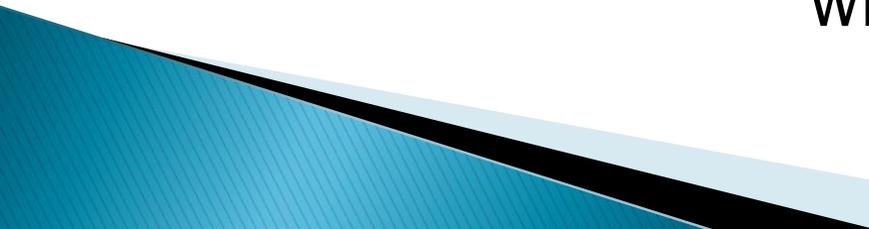


Missouri's Rapid Response Team

When You Need Help with Foodborne
Outbreaks and Contamination



What is the MRRT?

A new opportunity.



What is the MRRT?

Contamination of the food supply can lead to complex, large, multi-jurisdictional, multi-state emergencies.

The Missouri Rapid Response Team for Food and Feed (MRRT) is designed to respond to large multi-jurisdictional emergencies regarding food.

The Impact of Foodborne Illness

The United States Centers for Disease Control and Prevention (CDC) estimates that roughly one-in-six Americans—that's **48 million people**—will get sick from foodborne illnesses and that foodborne illness results in—

128,000 people hospitalized

3,000 deaths



In addition to the terrible human costs, there are also huge economic costs because of foodborne illness. One study by Ohio State University estimated that the annual cost for foodborne outbreaks reaches \$77.7 billion!

Economic Burden from Health Losses Due to Foodborne Illness in the United States, Robert L. Scharff, The Ohio State University, *Journal of Food Protection*, Vol. 75, No. 1, 2012, Pages 123-131.



Foodborne Outbreaks can be very Complex

Contamination can take place at many different points—

On the Farm

Processing

Distribution facilities

Transport

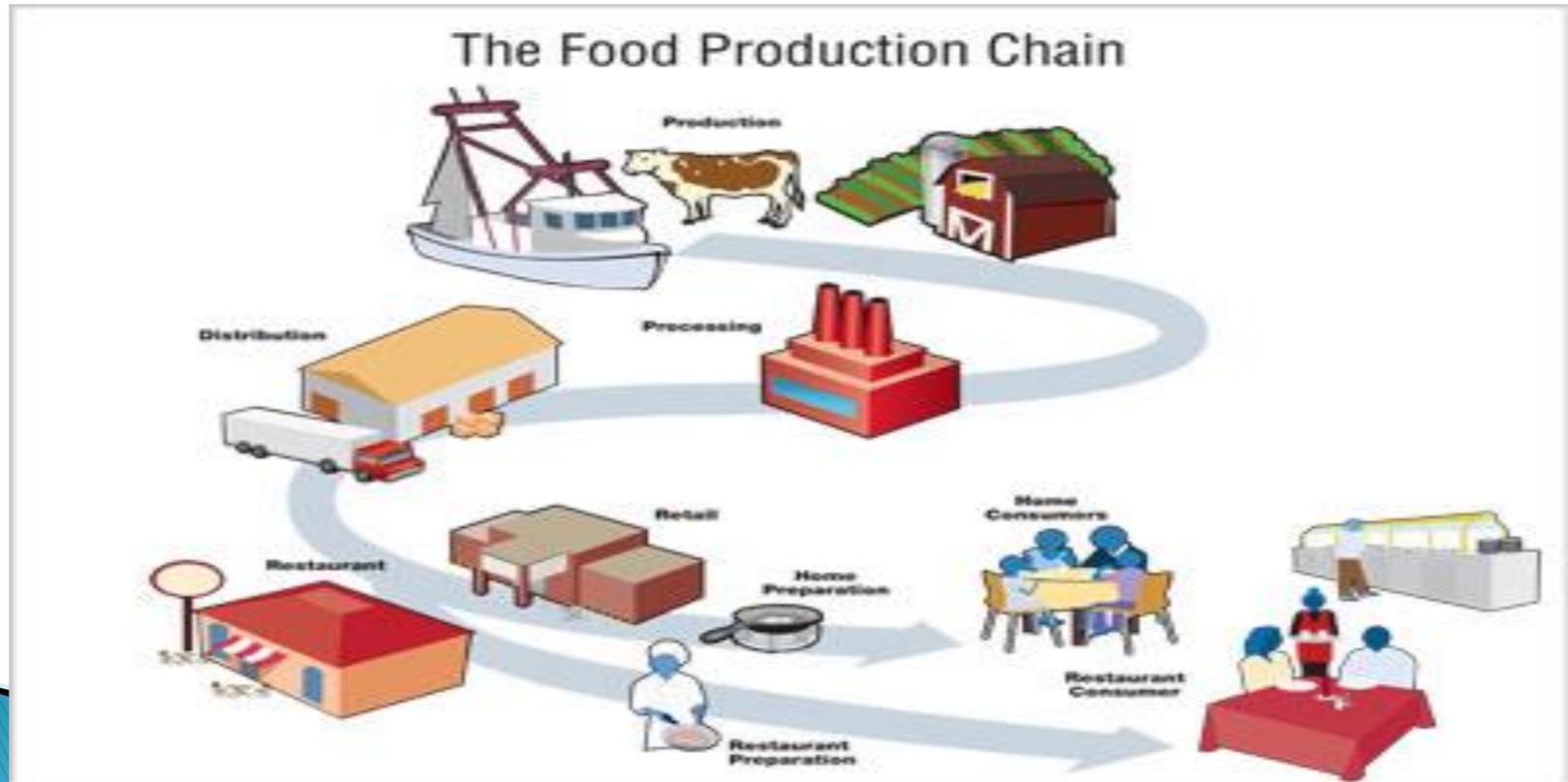
Retail

Restaurants

At home



Food can be grown in a different state or a different country, processed in another state, warehoused in a third state, and sold in Missouri. Every step along the way has the potential for contamination.



Tracing Back

Produce presents some tough challenges—

- ▶ It's grown outdoors
 - ▶ Germs may be present in soil, water or water for processing
 - ▶ Inadequate worker health and hygiene protections
 - ▶ Inadequate sanitation of equipment and facilities
 - ▶ Produce is often eaten raw
 - ▶ Because it's perishable, it may be consumed or disposed by the time someone becomes symptomatic
- 



2008 Multi-State Outbreak

In 2008, there was a multi-state outbreak of *Salmonella* St. Paul. At first tomatoes were suspected as the major source. As the investigation progressed they found the tomatoes were sent to washing, shipping and packing facilities where they were co-mingled with even more tomatoes from even more sources.



2008 Multi-State Outbreaks

However, jalapeno peppers and Serrano peppers from Mexico were later identified as the major source.

2008 Multi-State Outbreak

- ▶ From April through August 1,442 people were infected with the same *Salmonella* St. Paul with the same genetic fingerprint.
 - ▶ The outbreak hit 43 states, the District of Columbia and Canada.
- 

Multi-state Outbreaks in 2014

- ▶ [Cucumbers](#) – *Salmonella* Newport
- ▶ [Commercially Produced, Prepackaged Caramel Apples](#) – *Listeria monocytogenes*
- ▶ [Bean Sprouts](#) – *Salmonella* Enteritidis
- ▶ [Wholesome Soy Products Sprouts](#)– *Listeria monocytogenes*
- ▶ [Oasis Brands Cheese](#) – *Listeria monocytogenes*
- ▶ [Cilantro](#) – *Cyclospora* Infections in Texas
- ▶ [Nut Butter](#) – *Salmonella* Braenderup
- ▶ [Organic Sprouted Chia Powder](#) – *Salmonella* Newport, *Salmonella* Hartford, and *Salmonella* Oranienburg
- ▶ [Raw Clover Sprouts](#) – *Escherichia coli* O121
- ▶ [Ground Beef](#) – *Escherichia coli* O157:H7
- ▶ [Roos Foods Dairy Products](#) – *Listeria monocytogenes*
- ▶ [Tyson Chicken](#) – *Salmonella* Heidelberg
- ▶ [Raw Cashew Cheese](#) – *Salmonella* Stanley

- ▶ *Source CDC

The bottom line is foodborne outbreaks can be complex, involve many jurisdictions and multiple states... and have a major health and economic impact.

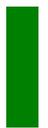
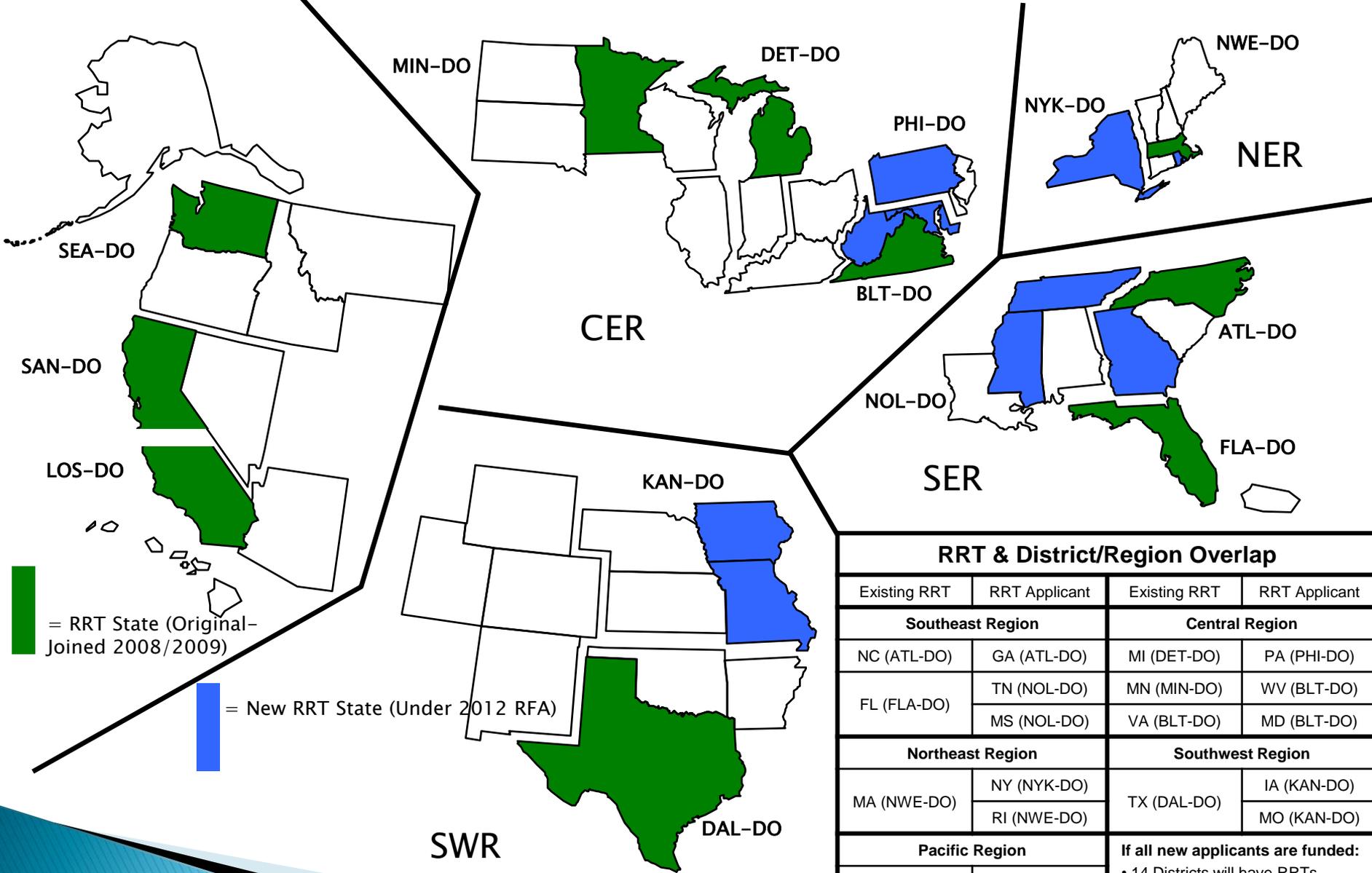


The MRRT Can Help



The Federal Food and Drug Administration (FDA) created the RRT project to enhance the response to large food and feed emergencies.

RRT States (Original & Additions from 2012 RFA)



= RRT State (Original-Joined 2008/2009)



= New RRT State (Under 2012 RFA)

RRT & District/Region Overlap			
Existing RRT	RRT Applicant	Existing RRT	RRT Applicant
Southeast Region		Central Region	
NC (ATL-DO)	GA (ATL-DO)	MI (DET-DO)	PA (PHI-DO)
FL (FLA-DO)	TN (NOL-DO)	MN (MIN-DO)	WV (BLT-DO)
	MS (NOL-DO)	VA (BLT-DO)	MD (BLT-DO)
Northeast Region		Southwest Region	
MA (NWE-DO)	NY (NYK-DO)	TX (DAL-DO)	IA (KAN-DO)
	RI (NWE-DO)		MO (KAN-DO)
Pacific Region		If all new applicants are funded:	
WA (SEA-DO)	N/A	<ul style="list-style-type: none"> • 14 Districts will have RRTs • 1 District will have 3 RRTs • 4 Districts will have 2 RRTs • 9 Districts will have 1 RRT 	
CA (LOS-DO & SAN-DO)			

The MRRT combines people and resources from FDA, the Missouri Department of Health and Senior Services (DHSS) and the Missouri Department of Agriculture (MDA).

The MRRT recognizes that feed is ultimately food.



It's important to emphasize that the RRT makes the most of existing practices and partnerships without reinventing the wheel.

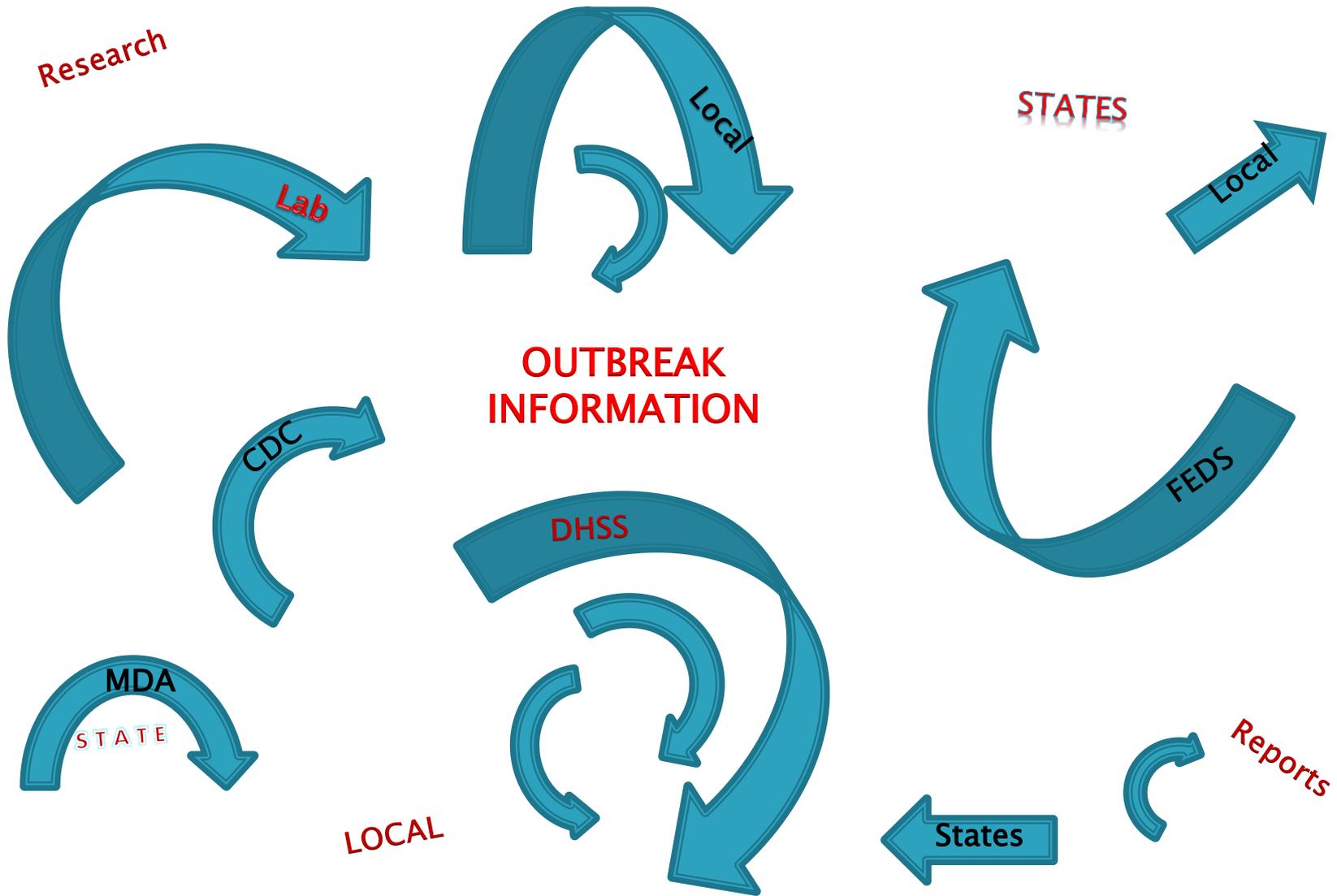


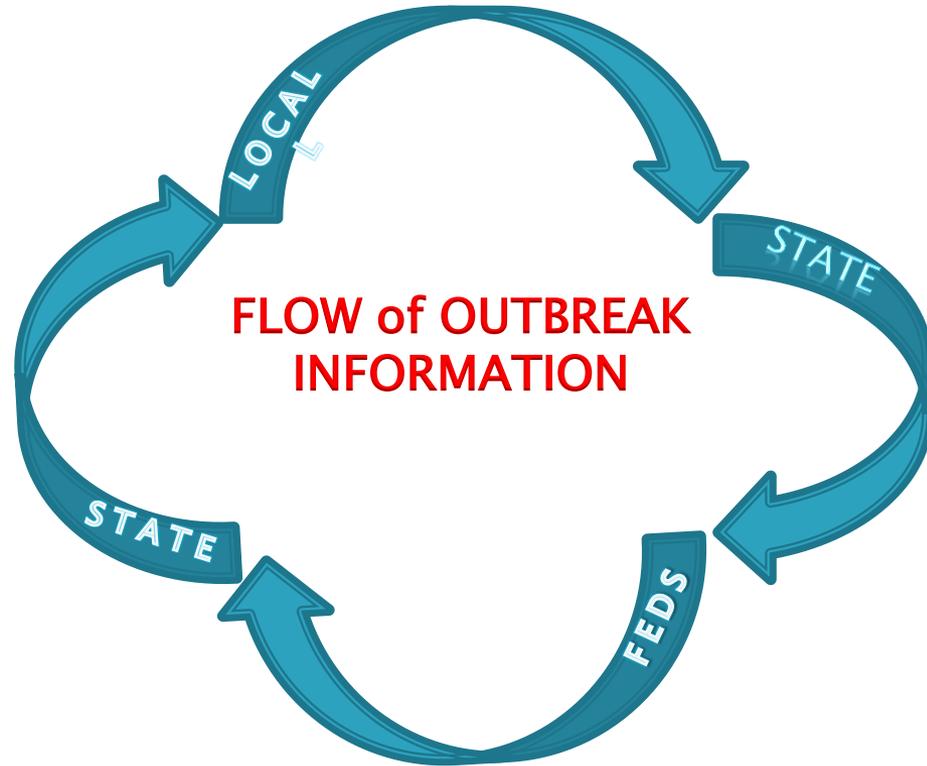
CRUCIAL ELEMENTS OF THE MRRT

- ▶ Combines FDA, DHSS and MDA into a response team to enhance communication and coordination.
 - ▶ Combines critical epidemiology, environmental health and laboratory components.
 - ▶ Uses existing systems and practices.
- 

How Does MRRT Affect You?

- ▶ When the MRRT is activated:
 - LPHA Environmental PH Specialists and Epidemiologists carry out FBI investigations as usual;
 - Communication with DHSS field staff and Lab does not change;
 - Communication flow is improved—DHSS RRT provides LPHA Administrators with daily updates.





Can an LPHA Ask for the MRRT?

- ❑ The answer is “yes.”
- ❑ It starts with an MRRT Steering Committee Meeting/Conference Call.
- ❑ To request the meeting, you can go through:
 - The DHSS Senior Epidemiologist for your area.
 - The Environmental Public Health Specialist V for your area.
 - DHSS Center for Local Public Health Services.

Ask by Completing the Steering Committee Request Form

- ▶ It's on the DHSS Intranet site at:
<http://clphs.health.mo.gov/ehcdp/>
Click on "MRRT Request form."
- ▶ The Senior Epi, Environmental Public Health Specialist V for your area or the Center for Local Public Health Services can also send you the form and help you if you need it.
- ▶ Complete the form. It's O.K. to answer "no" or "unknown."

Steps to Activate the MRRT

- ▶ Steering Committee Meets to recommend activation to the Executive Action Board (EAB).
 - ▶ Steering Committee meets and you will be part of the conference call if you've asked for the MRRT.
 - ▶ Steering Committee may meet multiple times if more evidence is needed so the MRRT has actionable direction. For example, we may need PFGE test results to show there is a cluster of illnesses that are related.
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Response to *Listeria monocytogenes* in Caramel Apples



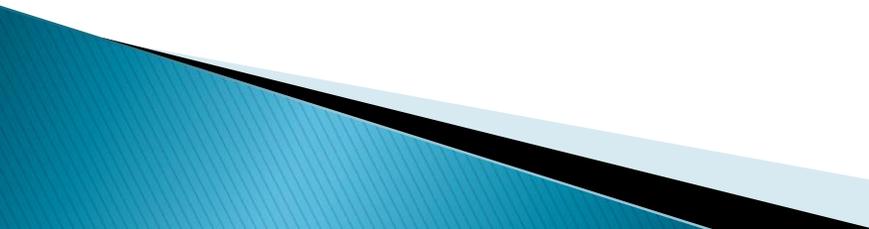
December 18 & 19, 2014

Case for Activation

- ▶ CDC is reporting that 28 people are ill from 10 different states including Missouri.
 - ▶ CDC—of 26 people for whom information is available, all have been hospitalized.
 - ▶ CDC—*Listeria monocytogenes* contributed to at least 4 deaths.
 - ▶ CDC—15 of 18 ill people interviewed reported eating commercially produced, prepackaged caramel apples before becoming ill.
- 

December 18 & 19, 2104

Case for Activation

- ▶ Five Missouri Cases.
 - ▶ Missouri orchards and businesses potentially involved.
 - ▶ Running out of time before Christmas. Need to have people committed before the Christmas break.
- 

MRRT Advantages

- ▶ Joint Team with FDA finds source firm, source apples are not from Missouri.... The source apples were from California.
 - ▶ Missouri played a crucial role in finding the source firm.
 - ▶ The Missouri State Public Health Laboratory helped in the middle of the Christmas rush.
- 



Jeremy Wilson working at the MSPHL

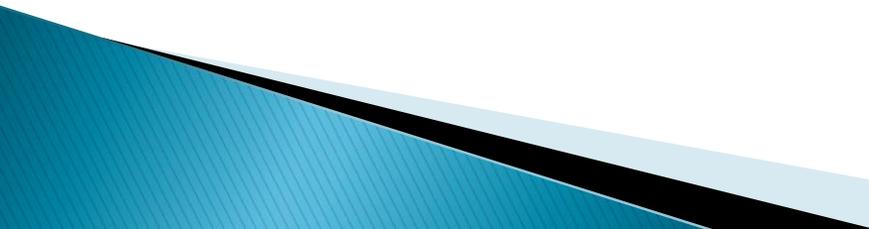
Environmental samples weren't dependent on shipping companies in the middle of the Christmas rush. Samples were taken directly to the MSPHL. However, MSPHL staff worked Christmas Eve night and Christmas morning to provide test results that moved the investigation forward and showed Missouri companies and orchards were not implicated in the outbreak.

MRRT Advantages

- ▶ Missouri team members worked with FDA and compiled information to send to LPHAs statewide for a recall.
 - ▶ The MRRT had a crucial role because the source firm in California only sent recall information to their distribution partners.
 - ▶ Without the MRRT, the recommendation was for customers to ask their store manager if they received their apples from the California company.
- 

MRRT provides a system to organize, coordinate and assure a flow of communication so we have the potential to resolve problems with greater coordination, more efficiently during large multi-jurisdiction or multi-state outbreaks.

MRRT
Missouri Rapid Response Team



It's All Connected !



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**Healthy People
Living in Healthy
& Safe
Environments**

